ExploAvatar
Study Buddy | AI Assistant Hackathon 2024, Kochi
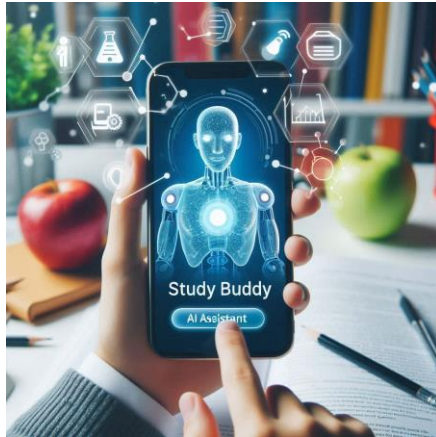
Free to Download and Try – Get Free TalkTime!

iOS App Store: https://apps.apple.com/us/app/study-buddy-ai-assistant/id6671574219
Google Play Store: https://play.google.com/store/apps/details?id=com.Uralstech.StudyBuddy

Video Demo
Functionality: https://youtu.be/JlhH-Uao_Mo?feature=shared
Hackathon: https://youtu.be/Z14R6r3kZvg?feature=shared

Prizes: More than 50 colleges participating for 100,000 Indian Rupees and more. _Win up to 10,000 Indian Rupees as prize per minimum 1000_ participants Cohort. Each 1000 participant cohort will get 5000 Rs as First Prize and 10 x 500 Rs consolation prizes.

Hackathon Announcement: Unleash Your Creativity with Study Buddy | AI Assistant!

Are you ready to revolutionize the way we learn and create? Join us for an exciting 6-hour Hackathon featuring Study Buddy |AI Assistant, your personalized multilingual AI learning assistant! This is your chance to explore innovative uses of AI and craft unique works of art, thoughtful ideas, or groundbreaking projects that showcase how technology can augment human creativity and satisfaction.

Date: 27th November, 2024
Time: 10.00 am to 4.00 pm

What's in Store:

�   6 Hours: Dive deep into the capabilities of Study Buddy with the free TalkTime given to you when you download the app in App Store or Play Store! Use its multilingual features, interactive tools, and AI-generated visuals to bring your ideas to life.

�   Individual Participation: Let your imagination run wild! Whether you're a coder, designer, or visionary thinker, everyone is welcome.

�   Showcase Your Work: Present your creations at the end of the event. Inspire others with your innovative approach to using AI in education and beyond.

�   Free to participate: You need not buy anything or pay for participating. Absolutely Free!

Why Participate?

�   Innovate: Explore new ways AI can enhance learning, creativity, and collaboration.

�   Network: Meet like-minded individuals, industry experts, and potential collaborators.

�   Win Prizes: Exciting rewards await the most creative and impactful projects! Win up to 10,000 Rupees per 1000 participant cohort.

Join us for a day of innovation and creativity! Together, let's harness the power of AI to enrich our learning experiences and create a brighter future.

Submission Site

Readme: https://github.com/Urav-Advanced-Learning-Systems-Pvt-Ltd/Study-Buddy-Engineering-Hackathon-2024/blob/main/README.md

GitHub: https://github.com/Urav-Advanced-Learning-Systems-Pvt-Ltd/Study-Buddy-Engineering-Hackathon-2024/issues

Let's create something extraordinary!

What to do: Use your imagination and create innovative results using any of the functionality of the app with the free TalkTime available. All within 12 hours. Present the chat output as text or video!

Example
1. Upload pdf text and ask AI to explain it in your native language
2. Make the AI search for new ideas for a research project in your subject.
3. Upload data json or image files and analyze it.

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4. Make imaginative Sci-Fi images of technology being used in the future.
5. Make AI teach you complicated concepts in your native language.

Study Buddy: Your Personalized Multilingual AI Learning Assistant

Overview: Study Buddy is an innovative AI-powered educational app designed to support students in their learning journey. This multilingual avatar-based app offers a personalized and interactive learning experience, helping students understand concepts more effectively. The app is available on Android, making it accessible to a wide range of users.

Key Features:
1. **Multilingual Conversational AI:**
   o Students can select their preferred input and output languages, enabling them to converse with the AI in a language they are most comfortable with.
   o The AI can understand and respond in multiple languages, making learning more inclusive.
2. **Avatar Creation and Customization:**
   o Students can create and edit their avatars from a single photograph, allowing for a personalized learning companion that feels unique to them. Upload photographs after signing in to ReadyPlayerMe through https://hai.readyplayer.me/
   o The avatar acts as a guide and mentor, delivering content and explanations in a friendly, interactive manner.
3. **Interactive Learning Tools:**
   o The app includes tools for editing spoken input, helping students correct any mistakes made during speech-to-text conversion.
   o Students can upload images, code files, PDFs, and DOC files to receive AI-generated explanations, summaries, or visual aids related to the content.
4. **AI-Generated Visuals:**
   o The AI is capable of generating images, graphs, and other visual aids based on the content, making complex topics easier to understand.
   o These visuals are presented in an answer box, where students can review and share them with others via WhatsApp or Email.
5. **Content Sharing:**
   o The app allows students to share generated content, such as images and graphs, directly through messaging platforms or email, facilitating easy collaboration and communication.

Study Buddy | AI Assistant Functionalities:

1. Conversational AI with Hyper-Customizable Animated Avatar

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   o Created from selfie or photo upload
2. Multilingual Support
   o Input and output language options
   o Supports multiple world and Indian languages
3. Speech-to-Text (STT)
   o Editable text before sending query to AI
4. AI-Powered Interactions
   o GPT4 API integration
   o Google STT, TTS, and Translate for languages
   o Google Search API for online search
5. File Upload and Support
   o Text files (PDF, DOCX, PPTX)
   o Data files (JSON)
   o Code files (PY, JS, CPP)
   o Image files (PNG, JPG)
6. Handwritten Note Analysis
   o Photograph analysis
   o Support for different languages
7. Code Interpreter
   o Math and graph interpretation
   o Coding support
8. Image Generation
9. Shareable Results
   o Native language support
   o Save or share results on:
     ▪ WhatsApp
     ▪ Social media platforms

These 9 functionalities make Study Buddy | AI Assistant a comprehensive and user-friendly educational tool, providing students with:
- Personalized learning experiences
- Multilingual support
- Seamless interactions
- Access to various file formats
- Advanced AI-powered features
- Easy sharing and collaboration capabilities

Use Cases: These are just example. The student has to use their imagination and creativity to find novel use cases.

Computer Science and IT:
1.   Virtual coding assistant: Use Study Buddy's code interpreter to write programs and present the chat leading to the code development.

General Knowledge and Theory

1. Programming Concepts:
   - What is the difference between a stack and a queue?
   - Explain the concept of object-oriented programming with examples.

2. Data Structures:
   - How would you implement a linked list in Python?
   - Describe the use and structure of a binary search tree.

3. Algorithms:
   - What is the time complexity of the QuickSort algorithm?
   - Explain the Dijkstra algorithm for finding the shortest path by taking a series of photograph and asking AI to analyze it.

Practical and Applied Tasks

1. Coding Challenges:
   - Write a function in Python to reverse a string.
   - Develop an algorithm to find the largest prime number less than 1000.

2. Data Analysis and Visualization:
   - Given a dataset (uploadable in json format), analyze and visualize the data using graphs.
   - Use the app to generate a graph showing the growth of internet users worldwide over the past decade.

3. File and Image Handling:
   - Upload a PDF and extract the text data for analysis.
   - Take a photograph of a circuit diagram and identify the components using image recognition features.

Technical Implementation and Integration

1. Integration with Online Resources:
   - Demonstrate how the app can search for the latest developments in AI technology and summarize findings.

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- Use the app to translate a technical document from English to another language and back to check translation accuracy.

2. Customization and Personalization:
- Customize an avatar from a single photo and demonstrate its use in a conversational scenario.
- Use the multilingual capabilities to have a conversation in a non-English language, showcasing translation features.

Advanced Topics

1. Machine Learning and AI:
- Explain the difference between supervised and unsupervised learning.
- How would you apply a machine learning model to predict stock prices?

2. Cybersecurity:
- Discuss common types of cybersecurity threats and how to mitigate them.
- Explain the role of encryption in data security.

Mechanical and Civil:
1.   Structural analysis and design optimization: Use Study Buddy's math and graph interpretation to analyze structural integrity.
2.   Material science and properties: Use Study Buddy's knowledge base to research material properties.

Electrical:
1.   Circuit design and simulation: Utilize Study Buddy's math and graph interpretation to analyze circuit behavior.
2.   Power systems analysis: Use Study Buddy's knowledge base to research electrical power systems.

Electronics and Communication:
1.   Digital signal processing: Use Study Buddy's math and graph interpretation to analyze signals.
2.   Communication systems design: Utilize Study Buddy's knowledge base to research communication protocols.

Biomedical and Chemical:
1.   Medical image analysis: Utilize Study Buddy's image generation and analysis capabilities.
2.   Clinical decision support system: Integrate Study Buddy with medical databases.

Conclusion: Study Buddy is a versatile and powerful educational tool that combines the latest AI technologies with a user-friendly interface. It empowers students to take control of their learning, offering personalized support that adapts to their needs and preferences.

MultiTalk Avatar AI Suite - Study Buddy | AI Assistant